

**METHOD AND APPARATUS FOR TRANSMITTING A COMMUNICATIONS  
SIGNAL FROM AN ADAPTIVE ANTENNA ARRAY**

A method (100) is provided for transmitting a traffic signal with an adaptive antenna array of a base transceiver such that a subscriber unit utilizes a non-dedicated pilot transmitted from a reference antenna element for demodulation of the traffic signal. The method (100) comprises determining a channel impulse response from a plurality of antenna elements in operative communication with the base transceiver to a receive antenna of the subscriber unit (102). In addition, the method (100) comprises computing an array weight vector that is at least a function of a reference channel impulse response of one of said plurality of antenna elements configured as a reference antenna element and the channel impulse response of one of the plurality of antenna elements that is an element of the adaptive antenna array (104), configuring the adaptive antenna array with the adaptive array weight vector (108) and transmitting the traffic signal with the adaptive antenna array configured with the adaptive array weight vector (110).